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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,589	10/15/2001	Herbert Zegg	ANDPAT/157PC	6343
2543	7590	03/08/2004	EXAMINER	
ALIX YALE & RISTAS LLP 750 MAIN STREET SUITE 1400 HARTFORD, CT 06103			KIM, SUN U	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/890,589	Applicant(s) ZEGG, HERBERT	
	Examiner John Kim	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 3, 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The drawings were received on 12/24/03. These drawings are acceptable.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 8-9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for creating overflow speeds at the membrane surfaces in the range of 1 to 5 m/sec, does not reasonably provide enablement for any other range for ensuring good cleaning of the membrane. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. Specification teaches that the overflow speeds in the range between 1 and 5 m/sec ensure good cleaning of the membrane (see page 2, lines 19-24). However, the specification does not guarantee good cleaning of membrane at any other overflow speeds.

4. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan, Vol. 18, No. 575, C-1268 (1994) corresponding to Japanese Patent No. 6-210295 (hereinafter referred to as JP '295) in view of admitted prior art description by the applicant, page 2, lines 5-13 of the specification. JP '295 teaches a method for crossflow filtration of a fluid using a filtration device having a plurality of overlapped rotating membrane discs (34) mounted on at least first and second hollow shafts (36) comprising the steps of rotating hollow shafts (36) and the membrane discs (34) mounted thereon at a rotational speed via motor (40) (see figures 1-2), introducing water (22) into at least the overlap area of the filtration device, creating turbulence on the surface of a membrane, filtering water through the membrane discs,

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collecting and discharging permeate from hollow shafts (36) and discharging concentrate via outlet (14) (see figure 1; abstract). Claim 1 essentially differs from the method of JP '295 in reciting the step of creating overflow speeds at the membrane surfaces in the range of 1 to 5 m/s. Applicant admitted that a circumferential speed of 2.2 m/s is mentioned for the disc in JP '295 and this would cause overflow speeds in the range of approximately 1 m/s for the mentioned operating mode and overlapping (see page 2, lines 5-13 of the specification). JP '295 teaches that water is filtered in a condition that the polarization of density is restricted as a rapid current and a turbulence generate on the surface of a membrane and flocculating agent and pH adjusting agent are mixed by a gyrating current generated by rotation of the membrane discs (34) (see abstract). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to increase the overflow speeds greater than 1 m/s and less than 5 m/sec to generate rapider current and greater turbulence on the surface of membrane to further restrict the polarization of density as water is filtered. Regarding claim 2, the cross-section of the circular membrane discs (34) is rectangular (see figure). Regarding claim 4, JP '295 shows a separate motor (40) for hollow shafts (36) and it would have been obvious to a person of ordinary skill in the art to provide a separate motors for hollow shafts to individually control and fine tune the speeds of each membrane discs (34) at different rotational speeds to generate gyrating current to mix flocculating agent and pH adjusting agent. Regarding claims 5-6, applicants admitted that JP '625 is an open system in which the filtrate is extracted by vacuum (see page 2, lines 6-7 of the specification).

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5. Claims 3 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. Applicants argue that it cannot logically be argued that it would have been obvious to increase the overflow speeds of the JP '295 apparatus greater than the overflow speeds utilized in such patent given the fact that the agitation caused by indiscriminately increasing "gyrating current", "rapid current" and "turbulence on the surface of a membrane" would destroy the flocs required for the proper operation of the apparatus. However, one in the ordinary skill in the art would recognize and be able to determine desirable overflow speed that will provide rapid current and turbulence on the surface of the membrane without destroying the flocs.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (571) 272-1142. The examiner can normally be reached on weekdays from 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (571) 272-1151. The fax phone number for official response is (703) 872-9306.

When sending a draft amendment by fax, please mark the paper as "DRAFT"; otherwise, mark the paper "OFFICIAL". This will expedite the processing of the paper.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.


John Kim
Primary Examiner
Art Unit 1723

J. Kim
March 1, 2004